

U.S. Pat. App. Ser. No. 10/633,734
Supplemental Amendment

Listing of Claims

Claims 1-3 (canceled)

Claim 4 (currently amended): A fiber coating applicator, comprising:

a chamber,

a cup positioned over the chamber, and

an entrance die assembly mounted into a ~~first opening~~ chamber entrance opening between the cup and the chamber,

~~the first opening being threaded to receive a first set screw,~~ the entrance die assembly including a ~~first an entrance~~ die insert mounted into a ~~first an entrance~~ fitting, ~~the first the~~ entrance fitting held in position by a ~~first an entrance~~ set screw that is screwed into the ~~first opening~~ chamber entrance opening,

~~the first the~~ entrance die insert having an entrance aperture therethrough connecting the cup to the chamber,

the chamber including an exit aperture opposite the entrance aperture, the cup, entrance aperture, chamber, and exit aperture defining a pathway for a fiber to be coated,

the chamber further including an input port for pumping a coating material into the chamber,

the entrance aperture being dimensioned such that as a ~~fiber~~ the fiber travels along the pathway and coating material is pumped into the chamber, coating material travels upward through the entrance aperture around the fiber into the cup, the upward flow of coating material being restricted by the fiber and entrance aperture such that there is a hydrostatic pressure in the chamber,

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the exit aperture being dimensioned to shape coating material around the fiber ~~a fiber~~
~~traveling along the pathway.~~

Claim 5 (canceled)

Claim 6 (currently amended): A fiber coating applicator, comprising:

a chamber,

a cup positioned over the chamber, the cup connected to the chamber by an entrance
aperture, and

a shaping die assembly mounted into a ~~second opening~~ chamber exit opening in the
chamber opposite the entrance aperture,

~~the second opening being threaded to receive a second set screw,~~ the shaping die
assembly including ~~a second~~ an exit die insert mounted into ~~a second~~ an exit fitting, ~~the second~~
the exit fitting held in position by ~~a second~~ an exit set screw that is screwed into the ~~second~~
opening chamber exit opening,

~~the second~~ the exit die insert having an exit aperture therethrough opposite the entrance
aperture, the cup, entrance aperture, chamber, and exit aperture defining a pathway for a fiber to
be coated,

the chamber further including an input port for pumping a coating material into the
chamber,

the entrance aperture being dimensioned such that as ~~a fiber~~ the fiber travels along the
pathway and coating material is pumped into the chamber, coating material travels upward
through the entrance aperture around the fiber into the cup, the upward flow of coating material

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being restricted by the fiber and entrance aperture such that there is a hydrostatic pressure in the chamber,

the exit aperture being dimensioned to shape coating material around the fiber ~~a fiber~~ traveling along the pathway.

Claim 7 (currently amended): A fiber coating applicator, comprising:

a chamber, and

a cup positioned over the chamber, the cup connected to the chamber by an entrance aperture,

the chamber including an exit aperture opposite the entrance aperture, the cup, entrance aperture, chamber, and exit aperture defining a pathway for a fiber to be coated,

the chamber further including an input port for pumping a coating material into the chamber,

the entrance aperture being dimensioned such that as ~~a fiber~~ the fiber travels along the pathway and coating material is pumped into the chamber, coating material travels upward through the entrance aperture around the fiber into the cup, the upward flow of coating material being restricted by the fiber and entrance aperture such that there is a hydrostatic pressure in the chamber,

the exit aperture being dimensioned to shape coating material around the fiber ~~a fiber~~ traveling along the pathway,

the chamber including a flexible gooseneck, the applicator further including at least one translation stage for adjusting the relative positions of the entrance and exit apertures.

Claims 8-15 (canceled)

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Claim 16 (currently amended): A fiber coating applicator, comprising:

a body in which there is formed a cup positioned over a chamber, the cup and chamber connected to each other by a ~~first-opening~~ chamber entrance opening,

the body further including a ~~second-opening~~ chamber exit opening at the base of the chamber opposite the entrance aperture ~~first-opening~~ chamber entrance opening,

the ~~first-opening~~ chamber entrance opening being threaded to receive a ~~first~~ an entrance set screw to hold an entrance die assembly in position, and the ~~second-opening~~ chamber exit opening being threaded to receive a ~~second~~ an exit set screw to hold a shaping die assembly in position,

the body further including an input port into the chamber for pumping a coating material into the chamber, and a drain port leading out of the cup for draining coating material out of the body,

the cup, ~~first-opening~~ chamber entrance opening, chamber, and ~~second-opening~~ chamber exit opening defining a coating pathway in which a fiber enters the body through the cup, passes through an entrance aperture in a ~~first~~ an entrance die mounted into ~~the entrance die assembly~~ an entrance die assembly mounted into the first-opening, passes through the chamber, and exits the body through an exit aperture in a ~~second~~ an exit die mounted into ~~the shaping die assembly~~ a shaping die assembly mounted into the second-opening,

the entrance aperture being dimensioned such that as a ~~fiber~~ the fiber travels along the coating pathway and coating material is pumped into the chamber, coating material travels upward through the entrance aperture around the fiber into the cup, with excess coating material being drained out of the cup through the drain port,

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the upward flow of coating material being sufficiently restricted by the fiber and the entrance aperture such that there is a hydrostatic pressure in the chamber.

Claim 17 (currently amended): A fiber coating applicator, comprising:

a body in which there is formed a cup positioned over a chamber, the cup and chamber connected to each other by a ~~first opening~~ chamber entrance opening,

the body further including a ~~second opening~~ chamber exit opening at the base of the chamber opposite the entrance aperture ~~first opening~~ chamber entrance opening,

the body further including first and second input ports leading into the chamber, the first and second input ports having different dimensions, for pumping a coating material into the chamber, and a drain port leading out of the cup for draining coating material out of the body,

the cup, ~~first opening~~ chamber entrance opening, chamber, and ~~second opening~~ chamber exit opening defining a coating pathway in which a fiber enters the body through the cup, passes through an entrance die mounted into the ~~first opening~~ chamber entrance opening, passes through the chamber, and exits the body through a shaping die mounted into the ~~second opening~~ chamber exit opening,

the entrance die having an entrance aperture dimensioned such that as ~~a fiber~~ the fiber travels along the coating pathway and coating material is pumped into the chamber, coating material travels upward through the entrance die around the fiber into the cup, with excess coating material being drained out of the cup through the drain port,

the upward flow of coating material being sufficiently restricted by the fiber and entrance die such that there is a hydrostatic pressure in the chamber.

Claims 18-20 (canceled)

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Claim 21 (previously presented): The applicator of claim 4, wherein the cup further includes a drain port for draining excess coating material out of the cup.

Claim 22 (currently amended): The applicator of claim 4,
wherein the entrance aperture has a diameter of 30 mils and the exit aperture has a diameter of 9.3 mils,
wherein the coating material has a viscosity of 40 centipoises,
wherein the fiber has a diameter of 200 microns,
and wherein the applicator is used to apply a coating having a thickness of 10-20 microns onto the fiber ~~a fiber having a diameter of 200 microns.~~

Claim 23 (previously presented): The applicator of claim 6, wherein the cup further includes a drain port for draining excess coating material out of the cup.

Claim 24 (currently amended): The applicator of claim 6,
wherein the entrance aperture has a diameter of 30 mils and the exit aperture has a diameter of 9.3 mils,
wherein the fiber has a diameter of 200 microns,
and wherein the applicator is used to apply a coating having a thickness of 10-20 microns onto the fiber ~~a fiber having a diameter of 200 microns.~~